

REMARKS

Claims 1-51 are pending in the application.

Claims 2, 5, 12-23, 31, 32, 35, 39, 41 and 43-46 stand withdrawn as non-elected and are hereby cancelled without prejudice for presentation in a divisional application.

Claims 1, 3, 4, 6-11, 24-30, 33, 34, 36-38, 40, 42 and 47-51 are rejected.

Claims 1, 3, 4, 6, 8-11, 24-30, 33, 34, 36-38, 40, 42, 47 and 48-51 are rejected under 35 U.S.C. § 103(a).

Claim 6 is rejected under 35 U.S.C. § 103(a).

Claims 1, 24, 36 and 47 stand amended.

New claims 52-53 are added.

No new matter is added.

Claims 1, 3, 4, 6-11, 24-30, 33, 34, 36-38, 40, 42 and 47-53 remain in the case for consideration.

Applicant requests reconsideration and allowance of the claims in light of the above amendments and following remarks.

Claim Rejections - 35 USC § 103

Claims 1, 3, 4, 6, 8-11, 24-30, 33, 34, 36-38, 40, 42, 47 and 48-51 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 6,503,776 B2 issued to Pai et al. ("Pai") in view of U.S. Pat. No. 6,228,687 B1 issued to Akram et al. ("Akram").

Applicant respectfully traverses the rejections.

With respect to amended independent claim 1, the claim is amended to clarify that the pad-rearrangement pattern *directly* contacts the bond pad-wiring pattern. For example, FIG. 8 of the present application shows this feature. In particular, pad-rearrangement pattern 15 directly contacts the bond pad-wiring pattern 12.

Akram discloses in FIGS. 8A and 8B and at column 11 lines 2-15 that conductive traces 222 are electrically connected to the bond pads 216 through intervening conductive bumps 217. Conductive traces 222 do not directly contact the bond pads 216. Thus, the combination of Pai and Akram fails to disclose each and every element of amended independent claim 1. Therefore, amended independent claim 1 is believed to be allowable over the combination of Pai and Akram and allowance is respectfully requested.

Claims 3, 4, 6, 8-11 and 51 all depend from claim 1, and for at least the reasons given for claim 1 these claims are believed to be allowable and allowance is respectfully requested.

With respect to amended independent claim 24, the claim is amended to clarify that that the pad-rearrangement pattern directly contacts the bond pad-wiring pattern and that an insulating layer is formed on the pad-rearrangement pattern with the bond pads exposed through the insulating layer, as discussed above with respect to claim 1.

Akram, as discussed above, discloses in FIGS. 8A and 8B and at column 11 lines 2-15 that conductive traces 222 are electrically connected to the bond pads 216 through intervening conductive bumps 217. Conductive traces 222 do not directly contact the bond pads 216. Further, Akram fails to disclose an insulating layer formed over the conductive traces 222 and exposing the external package bumps 124 through an insulating layer. Thus, the combination of Pai and Akram fails to disclose each and every element of amended independent claim 24. Therefore, amended independent claim 24 is believed to be allowable over the combination of Pai and Akram and allowance is respectfully requested.

Claims 25-30, 33 and 34 all depend from claim 24, and for at least the reasons given for claim 24 these claims are believed to be allowable and allowance is respectfully requested.

With respect to amended independent claim 36, this claim is amended to clarify that that the second pad-rearrangement pattern directly contacts the second bond pad-wiring pattern and that a second insulating layer is formed on the second pad-rearrangement pattern with the second bond pads exposed through the second insulating layer, similar to the discussion above with respect to claims 1 and 24.

Akram, as discussed above, discloses in FIGS. 8A and 8B and at column 11 lines 2-15 that conductive traces 222 are electrically connected to the bond pads 216 through intervening conductive bumps 217. Conductive traces 222 do not directly contact the bond pads 216. Further, Akram fails to disclose an insulating layer formed over the conductive traces 222 and exposing the external package bumps 124 through an insulating layer. Thus, the combination of Pai and Akram fails to disclose each and every element of amended independent claim 36. Therefore, amended independent claim 36 is believed to be allowable over the combination of Pai and Akram and allowance is respectfully requested.

Claims 37, 38, 40 and 42 all depend from independent claim 36, and for at least the reasons given for claim 36 these claims are believed to be allowable and allowance is respectfully requested.

With respect to amended independent claim 47, the claim is amended to clarify that that the pad-rearrangement patterns directly contact the bond pad-wiring patterns and that insulating layers are formed on the pad-rearrangement patterns with the bond pads exposed through the insulating layers, similar to the discussion above with respect to claims 1, 24 and 36.

Akram, as discussed above, discloses in FIGS. 8A and 8B and at column 11 lines 2-15 that conductive traces 222 are electrically connected to the bond pads 216 through intervening conductive bumps 217. Conductive traces 222 do not directly contact the bond pads 216. Further, Akram fails to disclose an insulating layer formed over the conductive traces 222 and exposing the external package bumps 124 through an insulating layer. Thus, the combination of Pai and Akram fails to disclose each and every element of amended independent claim 47. Therefore, amended independent claim 47 is believed to be allowable over the combination of Pai and Akram and allowance is respectfully requested.

Claims 48-50 all depend from claim 47, and for at least the reasons given for claim 47 these claims are believed to be allowable and allowance is respectfully requested.

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Pai in view of Akram and further in view of U.S. Pat. No. 6,239,366 B1 issued to Hsuan et al. ("Hsuan").

Applicant respectfully traverses the rejections.

The addition of Hsuan fails to cure the deficiencies of Akram with respect to amended independent claim 1. As stated above, Akram does not disclose a pad-rearrangement pattern directly contacting a bond pad-wiring pattern and does not disclose an insulating layer formed over the pad-rearrangement pattern with bond pads exposed through the insulating layer. Hsuan also fails to disclose these elements of amended independent claim 1. Claim 6 depends from claim 1 and, thus, necessarily includes all of the elements of claim 1. Thus, the combination of Pai, Akram and Hsuan fails to disclose each and every element of claim 6. Therefore claim 6 is believed to be allowable over the cited art of record and allowance is respectfully requested.

With respect to new claim 52, which recites, "an insulating layer formed on the pad-rearrangement pattern, wherein the bond pads are exposed through the insulating layer," it is allowable for the reasons discussed above.

With respect to new claim 53, which recites, "an insulating layer formed on the pad-rearrangement pattern, wherein the bond pads are exposed through the insulating layer" it is allowable for the reasons discussed above.

Conclusion

For the foregoing reasons, reconsideration and allowance of claims 1, 3, 4, 6-11, 24-30, 33, 34, 36-38, 40, 42 and 47-53 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

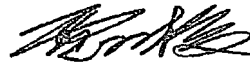
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